



Dear Stakeholder:

I am writing to you to tell you about our latest Rules to Live By campaign: "Rules to Live By III: Preventing Common Mining Deaths." This is our next step toward preventing deaths and injuries in our nation's mines. It is the third phase of MSHA's centerpiece mine fatality prevention initiative, "Rules to Live By: Fatality Prevention," launched in February 2010.

In 2011, mining fatalities fell to the second-lowest annual total on record—a testament to the commitment of miners, mine operators, miners' representatives, labor and industry organizations, state grantees, members of the mining community, MSHA personnel, state agencies, and others. While the mining community achieved near-record low numbers of mining fatalities in the United States and has seen a significant decline in fatal mining accidents during the past 10 years, too many miners still lose their lives in preventable accidents. The loss of even one miner causes devastation and pain to the victim's family, friends and co-workers. From CY 2001 – 2010, 609 miners lost their lives in our nation's mines: 328 miners died in coal mine accidents; 281 miners died at metal and nonmetal mines. While mining fatalities were at near-historic lows in 2011, we are still losing miners to preventable accidents. We must build on our successes of the past and move toward our ultimate goal of zero fatalities in the mining industry in this country.

To that end, on January 31, 2012, MSHA launched "Rules to Live By III: Preventing Common Mining Deaths," focusing on 14 safety standards—8 in coal mining and 6 in metal and nonmetal mining—cited as a result of at least five mining accidents and that resulted in at least five deaths during the 10-year period from January 1, 2001, to December 31, 2010. The goal of "Rules to Live By III: Preventing Common Mining Deaths" is to reduce deaths and injuries from the targeted standards by having mine operators identify and correct all hazardous conditions, ensuring miners are better trained in the types of conditions leading to fatalities, and directing MSHA enforcement toward confirming that violations related to these conditions are not present at mines. These standards are in addition to the standards identified in Rules to Live By I and II.

MSHA will begin this latest fatality prevention effort through a first phase of industry outreach and education, followed by increased scrutiny beginning on April 1 focusing on the 14 cited standards (8 in coal mining and 6 in metal/nonmetal mining) of which violations have caused or contributed to fatal accidents in the mining industry.

Between January 1, 2001, and December 31, 2010, there were 8 Coal standards that stood out as having contributed to at least 5 deaths and were cited in at least 5 fatal accident investigations. In all, these violations contributed to 58 deaths in Coal.

Between January 1, 2001, and December 31, 2010, there were 6 Metal/Nonmetal standards that stood out as having contributed to at least 5 deaths and were cited in at least 5 fatal accident investigations. In all, these violations contributed to 47 deaths in MNM.

The 14 standards are:

Coal

75.362(a)(1)	On-shift examination
77.404(a)	Machinery and equipment; operation and maintenance

77.405(b)	Performing work from a raised position; safeguards
77.1000	Highwalls, pits and spoil banks; plans
77.1605(b)	Loading and haulage equipment; installations
77.1606(a)	Loading and haulage equipment; inspection and maintenance
77.1607(b)	Loading and haulage equipment; operation
77.1713(a)	Daily inspection of surface coal mine; certified person; reports of inspection

Metal and Nonmetal

46.7(a)	New task training
56.3130	Wall, bank, and slope stability
56.3200	Correction of hazardous conditions
56.14100(b)	Safety defects; examination, correction and records
56.15020	Life jackets and belts
57.14100(b)	Safety defects; examination, correction and records

Beginning April 1, 2012, MSHA will focus more attention on these 14 standards with increased scrutiny for violations of these standards, and instructions to inspectors to carefully evaluate gravity and negligence, consistent with the seriousness of the violation, when citing violations of standards that cause or contribute to mining fatalities. In addition, MSHA will provide online training for its inspectors to promote consistency in enforcement activity across the agency. As with "Rules to Live By I and II," this online training is available to the mining industry and the public on MSHA's website. I have also attached information on the priority standards and conditions leading to fatalities for both the metal and nonmetal and coal mining sectors.

All of us—MSHA, mine operators, miners, independent contractors, and miners' representatives—must focus on why these accidents happen and how to prevent them. MSHA will provide operators program and resource information, and will reach out to engage miners and miners' representatives during the course of MSHA inspections, disseminating compliance assistance materials such as engineering suggestions, safety target materials packages, and other resources so that mine operators and miners have information available to address and eliminate workplace hazards.

Compliance with safety and health standards is the responsibility of mine operators. While MSHA supports education and outreach efforts to assist the mining industry in improving mine safety and health, MSHA is charged with ensuring compliance with safety and health standards, and expects operators to foster a culture of zero tolerance for violations in their operations, including violations by independent contractors. Please visit MSHA's "Rules to Live By" single-source web page for detailed information on all our "Rules to Live By" initiatives.

One death is too many. Working together, we can end these fatalities in the nation's mines. I look forward to working with the mining community to improve mine safety and health for the nation's miners.

Sincerely, 

Joseph A. Main
Assistant Secretary of Labor for
Mine Safety and Health

Coal Priority Standards

30 CFR § 75.362(a)(1)- On-shift examination- "At least once during each shift, or more often if necessary for safety, a certified person designated by the operator shall conduct an on-shift examination of each section where anyone is assigned to work during the shift and any area where mechanized mining equipment is being installed or removed during the shift. The certified person shall check for hazardous conditions, test for methane and oxygen deficiency, and determine if the air is moving in its proper direction."

During the review period, violations of 30 CFR §75.362(a)(1) contributed to 9 fatalities in 9 fatal accident investigations.

Conditions Leading to Fatalities

- An additional examination of the working area was not conducted when there was a previous hazardous condition found.
- The on-shift examination conducted in the working places failed to detect and subsequently correct a widespread and obvious hazardous roof condition.
- The on-shift records revealed that hazardous ribs had been recorded with little or no corrective action taken to limit or prevent exposure.
- The foreman failed to identify metal roof straps installed on the day shift which created a hazardous condition for the night shift continuous mining machine operator.
- Adequate on-shift examinations were not performed for several shifts, with hazardous conditions existing for at least a week.

30 CFR § 77.404(a)- Machinery and equipment: operation and maintenance- "Mobile and stationary machinery and equipment shall be maintained in safe operating condition and machinery or equipment in unsafe condition shall be removed from service immediately."

During the review period, violations of 30 CFR §77.404(a) contributed to 15 fatalities in 14 fatal accident investigations.

Conditions Leading to Fatalities

- Ineffective maintenance procedures allowed water to accumulate in the parking brake system, causing freezing in the system and not allowing the parking brakes to apply.
- The operator or contractor had no policies or procedures in place to ensure equipment was maintained in safe condition.
- A front-end loader remained in operation after a serious oil leak was observed.
- Brakes on mobile equipment were out of adjustment or otherwise improperly maintained.
- The man lift was not maintained in safe operating condition.
- Thorough pre-operational exams were not conducted.

30 CFR § 77.405(b) - Performing work from a raised position; safeguards - "No work shall be performed under machinery or equipment that has been raised until such machinery or equipment has been securely blocked in position."

During the review period, violations of 30 CFR §77.405(b) contributed to 7 fatalities in 7 fatal accident investigations.

Conditions Leading to Fatalities

- A driver placed himself in a hazardous position beneath the truck between the axle and an improvised metal stand.
- A lead mechanic performed work beneath a front-end loader bucket that was not blocked against motion.
- A mechanic became pinned to the ground when the belly pan of a bulldozer fell on him.
- A 10-foot step ladder was hit by an overhead rolling steel door that was not securely blocked, causing the employee to fall.
- A hoist boom that was not securely blocked in position fell, fatally striking a miner working directly underneath it.

30 CFR § 77.1000- Highwalls, pits and spoil banks; plans- "Each operator shall establish and follow a ground control plan for the safe control of all highwalls, pits and spoil banks to be developed after June 30, 1971, which shall be consistent with prudent engineering design and will insure safe working conditions. The mining methods employed by the operator shall be selected to insure highwall and spoil bank stability."

During the review period, violations of 30 CFR §77.1000 contributed to 6 fatalities in 5 fatal accident investigations.

Conditions Leading to Fatalities

- The ground control plan for the mine did not include methods to keep persons from being exposed to the hazardous condition of portions of the highwall having been developed in dirt, on a near vertical angle, and being unstable.
- The mine operator's established ground control plan was not being followed where a highwall drill was being used to drill blast holes.
- The segment of the highwall that failed was oriented nearly parallel to a well developed joint set.
- The operator's established ground control plan was not adequate to provide safe control of the highwall, pits, and spoil banks.
- The mine operator engaged in aggravated conduct constituting more than ordinary negligence by allowing mining operations to proceed before hazardous conditions were corrected.

30 CFR § 77.1605(b)- Loading and haulage equipment; installations- "Mobile equipment shall be equipped with adequate brakes, and all trucks and front-end loaders shall also be equipped with parking brakes."

During the review period, violations of 30 CFR §77.1605(b) contributed to 10 fatalities in 10 fatal accident investigations.

Conditions Leading to Fatalities

- The flow of brake fluid to the wheel was stopped due to a piece of rubber blocking a fitting.
- The brakes were contaminated with grease and oil.
- Wear on the brake drums was in excess of the maximum allowable diameter.
- Bluing indicating excessive heat was found on the brake drum.

- Five of the six service brake chamber pushrod strokes for the truck exceeded the maximum allowable pushrod stroke readjustment limit.

30 CFR § 77.1606(a)- Loading and haulage equipment; inspection and maintenance-

"Mobile loading and haulage equipment shall be inspected by a competent person before such equipment is placed in operation. Equipment defects affecting safety shall be recorded and reported to the mine operator."

During the review period, violations of 30 CFR §77.1606(a) contributed to 9 fatalities in 9 fatal accident investigations.

Conditions Leading to Fatalities

- A truck with multiple brake system failures was not adequately inspected before being placed into service.
- There was no program in place to ensure that pre-operational checks were conducted.
- The pre-operational inspection failed to reveal that the driver side steering axle brake linings did not contact the brake drum when the brakes were applied.
- An adequate pre-shift inspection was not conducted which would have revealed that six trailer brakes were ineffective.
- Inspections of the defective truck were not being conducted by a qualified person before the truck was placed in operation.
- Defects affecting safety were not being recorded and reported to mine management.

30 CFR § 77.1607(b)- Loading and haulage equipment; operation- "Mobile equipment operators shall have full control of the equipment while it is in motion."

During the review period, violations of 30 CFR §77.1607(b) contributed to 11 fatalities in 11 fatal accident investigations.

Conditions Leading to Fatalities

- A rock truck backed over the edge of a dump site and overturned.
- An equipment operator failed to maintain full control of a dozer he was operating on extreme slope conditions.
- An operator overturned a truck into a newly constructed pond.
- Management knew that trucks were routinely overloaded and did nothing to stop this practice.
- A mobile equipment operator received crushing fatal injuries when the operator of a second truck failed to maintain control of his vehicle and hit the back of the victim's haul truck.

30 CFR § 77.1713(a)- Daily inspection of surface coal mine; certified person; reports of inspection- "At least once during each working shift, or more often if necessary for safety, each active working area and each active surface installation shall be examined by a certified person designated by the operator to conduct such examinations for hazardous conditions and any hazardous conditions noted during such examinations shall be reported to the operator and shall be corrected by the operator."

During the review period, violations of 30 CFR §77.1713(a) contributed to 8 fatalities in 7 fatal accident investigations.

Conditions Leading to Fatalities

- Loose material from a blast of overburden migrated to the edge of a highwall and fatally struck a worker hand shoveling spoil material below.
- The operator failed to conduct an adequate on-shift daily examination that would have indicated that the edge of a dump point had no berms, bumper blocks, safety hooks, or similar means to prevent overturning.
- The hazards of a sliding stockpile that were discovered during an examination were neither reported nor corrected.
- A highwall was examined from the top only, leaving hazards on the pit floor unobserved.
- Examinations of areas where tree cutting was being conducted were made from a remote location and did not adequately detect hazardous conditions.

Metal and Nonmetal Priority Standards

30 CFR § 46.7(a)- New task training- "You must provide any miner who is reassigned to a new task in which he or she has no previous work experience with training in the health and safety aspects of the task to be assigned, including the safe work procedures of such task, information about the physical and health hazards of chemicals in the miner's work area, the protective measures a miner can take against these hazards, and the contents of the mine's HazCom program. This training must be provided before the miner performs the new task."

During the review period, violations of 30 CFR §46.7(a) contributed to 21 fatalities in 21 fatal accident investigations.

Conditions Leading to Fatalities

- A miner who had not been task trained was run over after being ejected from the cab of a wheeled loader.
- A miner was fatally burned by a release of steam while cleaning a reaction tank. The mine operator had failed to provide task training.
- A laborer was fatally injured when the forklift he was operating left the roadway and overturned. The victim had not been task trained.
- A contractor was killed when the trench wall collapsed and buried him. He had not been task trained on working in and around trenches.
- A plant laborer was fatally injured when his arm was drawn into a conveyor belt as he attempted to adjust a return idler roller. He had not been task trained.

30 CFR § 56.3130- Wall, bank, and slope stability- "MINING METHODS: Mining methods shall be used that will maintain wall, bank, and slope stability in places where persons work or travel in performing their assigned tasks. When benching is necessary, the width and height shall be based on the type of equipment used for cleaning of benches or for scaling of walls, banks, and slopes."

During the review period violations of 30 CFR §56.3130 contributed to 6 fatalities in 6 fatal accident investigations.

Conditions Leading to Fatalities

- The highwall failed and buried the mine foreman while he was operating a bulldozer at the toe of the highwall.
- Mining methods were not used that ensured that bank and slope stability was maintained for the type of equipment used, causing an excavator to slide down an embankment, fall on its side, and crush the victim inside.
- Tailings sand was beached, sloping to the water's edge, causing a forklift to fall into the water, drowning the victim.
- A highwall collapsed, fatally injuring the company president inside the cab of a front-end loader as he removed material from the base.

30 CFR § 56.3200- Correction of hazardous conditions- "SCALING AND SUPPORT:

Ground conditions that create a hazard to persons shall be taken down or supported before other work or travel is permitted in the affected area. Until corrective work is completed, the area shall be posted with a warning against entry and, when left unattended, a barrier shall be installed to impede unauthorized entry."

During the review period, violations of 30 CFR §56.3200 contributed to 6 fatalities in 6 fatal accident investigations.

Conditions Leading to Fatalities

- Ground conditions that created a hazard were not corrected nor was the area barricaded to prohibit entry to work or travel in the area, causing a front-end loader operator to be buried under material that fell off the highwall.
- The sides of a trench had not been sloped or supported and the victim was engulfed when the trench wall partially collapsed.
- A loader operator was struck by rock at the quarry's east bank due to hazardous ground conditions not being posted or barricaded to impede entry.
- No measures were taken to take down or support unstable material that had been cut from a highwall in preparation for removal.
- An excavation cut into a steep hillside was not taken down, supported or posted with a warning, causing fatal injuries to a grade setter who entered the hazardous area.

30 CFR § 56.14100(b)- Safety defects: examination, correction and records- "Defects on any equipment, machinery, and tools that affect safety shall be corrected in a timely manner to prevent the creation of a hazard to persons."

During the review period, violations of the surface standard 30 CFR §56.14100(b) contributed to 5 fatalities in 5 fatal accident investigations.

Conditions Leading to Fatalities

- The safety latch (stop) installed on the right moveable beam of a dragline, which would have prevented the hoist from moving to the stationary beam, was stuck in the up position, and safety latches (stops) were not installed on the stationary beam which would have prevented the hoist from falling from the end of the beam.

- The safety monitoring system designed to de-energize the liquid waste fuel pump in the event that flow was not maintained was inoperative.
- Sump pumps were installed in lieu of repairing leaking dredge pontoon shells, allowing the dredge operator to drown after the floating grab "clamshell" dredge he was operating capsized.
- Miners were unable to monitor and limit the hydraulic pressure during the tensioning process due to a non-functioning pressure gauge and improperly set relief valve.
- The mine operator was aware of defects affecting the safety of hydro-blasting equipment and did nothing to correct the hazardous conditions. .

30 CFR § 56.15020 - Life jackets and belts - "Life jackets or belts shall be worn where there is danger from falling into water."

During the review period, violations of 30 CFR §56.15020 contributed to 6 fatalities in 6 fatal accident investigations.

Conditions Leading to Fatalities

- A dredge operator was not wearing a life jacket, fell from the work deck, and drowned.
- A worker attempted to help his co-worker who had fallen into the water near the edge of an embankment and drowned.
- A plant operator failed to wear a life jacket and was fatally injured when his workboat capsized.
- Dredge operators were not wearing life jackets or belts where there was a danger of falling into water.

30 CFR § 57.14100(b)- Safety defects: examination, correction and records- "Defects on any equipment, machinery, and tools that affect safety shall be corrected in a timely manner to prevent the creation of a hazard to persons."

During the review period, violations of the underground standard 30 CFR §57.14100(b) contributed to 6 fatalities in 5 fatal accident investigations.

Conditions Leading to Fatalities

- A miner was crushed between the rib and the mucker because there was a wooden wedge forced into the left stop of a track mucker bucket and the right stop was rusted open.
- Free play of one quarter turn in the steering wheel of a tractor and air pressures in the rear tires below safe levels allowed the tractor to overturn during an "S" turn upgrade.
- The right side-view mirror on a front-end loader was broken, preventing the operator from seeing persons standing at the rear of the machine.
- Warning alarms and fault lights were disabled on a front-end loader, preventing the operator from being alerted of defective brakes before the loader struck the victim.